

Scientists create new cloning method

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U.S. scientists say they have achieved a one-step somatic cell nuclear transfer procedure using a differentiated cell as a nuclear donor.

The University of Connecticut researchers say their study demonstrates fully differentiated granulocytes yield cloned mice with greater efficiency than undifferentiated blood stem cells.

Somatic cell nuclear transfer -- SCNT -- is the procedure by which cloned animals are typically produced and involves the injection of a nucleus from a donor cell into an egg whose nucleus has been removed. Previous studies reported cloned mice could only be generated with differentiated cells as nuclear donors using a two-step procedure, in which the early embryos generated by SCNT are first used to generate embryonic stem cells that are subsequently injected into another recipient embryo.

Other studies also reported the cloning efficiency for embryonic stem cells is much higher than for other kinds of cells.

But Xiangzhong Yang and colleagues injected nuclei from blood cells at different stages of differentiation into donor eggs and report the nuclei of granulocytes allow for more efficient production of cloned embryos than blood stem cells.

They say two live pups were born using that procedure.

The experiment appears in the journal Nature Genetics.

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